

Remarks

The Final Office Action dated August 16, 2010, lists the following rejections: claims 1- 6, 9, 13-15 and 17 stand rejected under U.S.C. § 102(b) over Czubyj (U.S. Patent No. 5,825,046); claims 16 and 18-21 stand rejected under U.S.C. § 102(b) over Ovshinsky (U.S. Patent No. 5,912,839); and claims 7-8 and 10-12 stand rejected under U.S.C. § 103(a) over the '046 reference. In the following discussion, Applicant does not acquiesce to any rejections or averments in this Office Action (unless Applicant expressly indicates otherwise).

Applicant asserts that the current Office Action is improperly made final. Under M.P.E.P. § 707.07(f), "[w]here the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it." In the response to arguments section on page 4 of the current Office Action, the Examiner states that "Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new grounds of rejection." However, the rejections of previously at issue claims 1-15 have been repeated word for word. Therefore, the new grounds with respect to newly presented claims 16-20 do not render Applicant's previous arguments moot. Further, because Applicant did not make amendments affecting the scope of claims 1-15, had new grounds been included, a final Office Action would have been improper under M.P.E.P. § 706.07(a). Accordingly, the Examiner had an obligation under § 707.07(f) to respond to all of Applicant's previous arguments.

The current Office Action fails to address Applicant's arguments regarding, for example, claims 7-8 and 10-12 and the previous Office Action's assertions of optimum working ranges and routine experimentation. Because the current Office Action fails to provide adequate response to Applicant's previously presented arguments as required under M.P.E.P. § 707(f), Applicant respectfully requests the finality of the rejection be withdrawn.

Applicant respectfully traverses the § 102(b) and § 103(a) rejections because the cited '046 reference lacks correspondence. For example, the asserted reference does not teach the claimed invention "as a whole" (§ 103(a)) including, *e.g.*, aspects regarding the phase change material being a fast growth material and/or aspects regarding detectable

relative resistance levels or ratios. Because the reference does not teach these aspects, no reasonable interpretation of the asserted prior art can provide correspondence. As such, the rejections fail.

The '046 reference fails to provide correspondence to a "fast growth material" as defined or characterized in the Specification. In asserting the teachings of the '046 reference, the Office Action failed take into account that the requirement that an examiner must interpret the claims in a manner that is "consistent with the specification." M.P.E.P. § 2111 (*see also* M.P.E.P. § 2111.01 (an applicant can be his own lexicographer)). The Specification explains what a "fast growth material" is and is not. For example, the Specification explains that "fast growth material" is a class of materials that is distinguishable from known phase change materials based on a different crystal growth mechanism. In a more particular discussion, the Specification explains that "fast growth material" transitions at relatively high approximate constant speed where crystallization proceeds along the interface between the two phases. *See* paragraphs 0011 and 0012 of the published application, and *see also* paragraph 37. The Office Action has failed to establish correspondence with the material disclosed in the '046 reference which would at best appear to align with the Specification's discussion of previously-known phase change materials. *See, e.g.,* the '046 reference's teaching of a phase change material as being a modified form of a Te-Ge-Sb alloy, with an approximate combination of $\text{Te}_5\text{Ge}_2\text{Sb}_2$. *See* Col. 7:45-54 and Col. 8:40-44. Applicant discloses the prior art material, which uses nucleation in crystallization, as being an alloy with the approximate composition of $\text{Sb}_2\text{Te}_5\text{Ge}_2$. *See* paragraph 0003 of the published application. Applicant's Specification specifically discloses such material changing through the nucleation process. *See* paragraph 0011 of the published application. Accordingly, the '046 reference appears to be merely cumulative prior art that does not disclose a fast growth material as claimed. Therefore, the '046 reference lacks correspondence to the claimed invention and the § 102(b) and § 103(a) rejections should be withdrawn.

The Office Action's arguments in response to Applicant's previous arguments regarding the "fast growth material" are improper in several ways. First, the term "fast growth material" as used in the claims and specification, is a term to describe a specific type of material. The use of "fast" is not simply as an adjective, but rather as part of a

greater descriptive name given to a material having specific characteristics described within the specification. Second, contrary to the Office Action's assertions, requiring looking to the specification to determine the meaning of "fast growth material" does not read limitations from the specification into the claims. As previously brought to the attention of the Examiner, and reiterated above, "[d]uring patent examination, the pending claims must be 'given their broadest reasonable interpretation consistent with the specification.'" M.P.E.P. § 2111, *citing Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005), that "[t]he broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach." *Id.*, and that "[a]n applicant is entitled to be his or her own lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a definition of the term that is different from its ordinary and customary meaning(s)." M.P.E.P. § 2111.01. One of skill in the art would look to the specification to determine the meaning of "fast growth material." In doing so, one of skill in the art would realize that the material of the '046 reference is not "fast growth material" as defined by Applicant's specification, and accordingly that the '046 reference does not correspond to the claimed invention.

Further, as asserted previously, Applicant has acted as lexicographer and defined the meaning of "fast growth material." The specification uses the term "fast growth material" 13 times throughout the specification. Each use of the term furthers the definition of "fast growth material" as having a different crystal growth mechanism than the previously defined class of phase change materials, and that the growth pattern is as described in Figure 1B. Therefore, the Examiner's continued insistence that the phase change material of the '046 reference corresponds to the claimed "fast growth material" is improper, and the § 102 and § 103 rejections should be withdrawn.

Applicant further traverses the § 102(b) rejections of claims 4-6, 9, 13-15 and 17 for lack of correspondence. The Office Action lists these claims as being anticipated by the '046 reference. However, the Office Action fails to provide any assertions of correspondence to any of the limitations in claims 4-6, 9, 13-15 and 17. Further, the '046 reference does not appear to correspond to various aspects of the claims. For example, the '046 reference does not appear to disclose certain aspects of the claims directed to a

read out circuit, read voltage, read current, or minimum current. Therefore, as the record currently stands there is an un-rebutted presumption that claims 4-6, 9, 13-15 and 17 contain patentable subject matter. Applicant therefore requests that the rejection of claims 4-6, 9, 13-15 and 17 be removed.

The Office Action's § 103(a) rejection of claims 7-8 and 10-12 evidences a misunderstanding of what is being claimed. In attempting to assert correspondence, the Office Action proposes that specific limitations of the claims are obvious because one of skill in the art would discover optimum working ranges. However, this position ignores the teachings of the '046 reference, and the specifics of the claim limitations. For example, claim 11 includes a limitation wherein the phase change material has a formula of $Sb_{1-c}M_c$. In attempting to assert correspondence, the Office Action erroneously alleges that such a formulation of the phase change material would be obvious and realized by routine experimentation. A careful reading of the M.P.E.P. and the cited decision, *In re Aller*, will clarify that in the absence of some suggestion to modify, a § 103(a) rejection cannot be maintained based on assertions that the invention is merely a design choice or a realization from experimenting with the prior art; if that were the standard, no patent would issue. The '046 reference lacks any information regarding materials (as claimed and disclosed in the specification) having minimum formulation of $Te_aGe_bSb_{100-(a+b)}$. Further, the '046 reference lacks any suggestion that experimentation (routine or otherwise) would be useful to pursue any aspect(s) or advantage(s) realized by a phase change material as disclosed and claimed by Applicant. Accordingly, the § 103(a) rejections are improper and must be withdrawn.

In view of the above, Applicant believes that each of the rejections is improper and should be withdrawn and that the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

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